A. Cover Sheet *(Attach to front of proposal.)*

WUE01-0018

1. Specify: ☐ agricultural project or ☒ urban project ☐ individual application or ☐ joint application

2. Proposal title—concise but descriptive: Urban landscape and commercial water conservation Retrofit project.

3. Principal applicant—organization or affiliation: City of Fresno

4. Contact—name, title: David Todd: Water Conservation Supervisor

5. Mailing address: 1910 E. University Fresno, CA. 93703

6. Telephone: (559) 498-4133

7. Fax: (559) 498-4228

8. E-mail: Dave.Todd@ci.fresno.ca.us

9. Funds requested—dollar amount: $ 129,800

10. Applicant cost share funds pledged—dollar amount: $ 31,261

11. Duration—(month/year to month/year): June 2001 to July 2003

12. State Assembly and Senate districts and Congressional district(s) where the project is to be conducted: Assembly 25,29,30,31 Senate 12,14,16 Congressman 19,20

13. Location and geographic boundaries of the project: City of Fresno Metropolitan Area

14. Name and signature of official representing applicant. By signing below, the applicant declares the following:
- the truthfulness of all representations in the proposal;
- the individual signing the form is authorized to submit the application on behalf of the applicant;
- the applicant will comply with contract terms and conditions identified in Section 11 of this PSP.

HENRY McLAUGHLIN
(printed name of applicant)

2/14/01
(date)

Henry McLaughlin
(signature of applicant)

URBAN LANDSCAPE AND COMMERCIAL WATER CONSERVATION PROGRAM

City of Fresno Water Division
Dave Todd, Supervisor Water Conservation Program

1910 E. University
Fresno, CA 93703-2988
Phone: 559-498-4133
Fax: 559-498-4228
E-mail: Dave.Todd@ci.fresno.ca.us

Funds requested: $129,800

Cost share pledged: $ 31,261
Duration: two years

State Assembly districts: 25, 29, 30, 31
State Senate districts: 12, 14, 16
Congressional districts: 19, 20

Location of project: City of Fresno metropolitan area

Name and signature of official representing applicant. By signing below, the applicant declares the following:

- $ the truthfulness of all representations in the proposal;
- $ the individual signing the form is authorized to submit the application on behalf of the applicant;
- $ the applicant will comply with contract terms and conditions identified in Section 11 of this PSP.

_____ _____

(printed name of applicant) (date)

_____

(signature of applicant)

URBAN LANDSCAPE WATER CONSERVATION PROGRAM

Scope of Work

The Pilot Water Conservation Program is designed to:

$ Ensure the reliability of the water supply by assessing the effectiveness of specific measures to reduce peak demand, which in turn would reduce groundwater overdraft.

$ Ensure water quality by reducing urban runoff and slowing the movement of contaminated plumes in the newer developments of Northeast Fresno Pressure Zone 4.

The funds would be applied to:

$ The purchase and installation of approximately 30 water saving devices and irrigation meters.

$ The purchase (or replacement) of irrigation timers (where necessary).

Staff will:

$ Monitor the operation of pilot program irrigation systems and evaluate water use on a bi-monthly basis.

$ Prepare an annual report.

$ Calculate the cost-effectiveness of the program.

$ Estimate the potential environmental benefits from reduced overdraft, contaminant plume movement, and urban runoff (and reduced flows in areas where landscape water passes through the wastewater system).

Outreach, Community Involvement, and Information Transfer

Commercial and residential customers with in-ground irrigation systems will be invited to participate in the pilot program on a voluntary basis. Irrigation devices, landscape meters and irrigation equipment will be installed at approximately 30 locations. Customers who participate will be required to follow the City guidelines on watering hours, minutes of water per week for turf watering, install landscape services and irrigation meters, install (or replace) irrigation timer (where necessary), and install water saving devices.

The Fresno Metropolitan Flood Control has been invited to participate in the pilot program. The reduction of landscape irrigation Arun-off@ resulting from the increase in irrigation efficiency will have a positive effect on groundwater quality.

Qualifications of applicant

David D. Todd
1487 N. Farris Avenue
Fresno, California 93728-1521
(209) 266-9230
email davet@ci.fresno.ca.us

Work Experience

Technical Specialties: Municipal/Local Gov Organizations - Twenty-eight years experience in local government. Environmental and Natural Resources Management, Watershed Management - Twenty years experience as supervisor of the City of Fresno Water Conservation Program. Extensive technical expertise in demand reduction programs for water and other resources.

Education

B.A. Public Administration California State University, Fresno, 1972
M.A. With Distinction in Political Science with a concentration in Public Administration, 1974
Graduate study, sixteen units in Economics,1977-78
Eight units completed toward Ph.D. in Political Science, University of California, Davis, 1987

Professional Experience

Sep, 1988 to Present Water Conservation Supervisor, City of Fresno Public Utilities Department

Manage the activities of the City of FresnoWater Conservation Program which includes public information and water education,enforcement and appeals, xeriscape landscaping, residential retrofits, and commercial/industrial conservation. Implement BestManagement Practices for Urban WaterConservation.

Other Experience

Jan 1998 to Present Producer, Celebrity Dirt Productions – Produce to present videos, commercials and documentaries.

Aug 1997 to present	Principal, SynAqua - Prepare water conservation plans for urban and agricultural water agencies.
Jan 1984 to Present	Lecturer, California State University, Fresno Graduate and under graduate classes in public administration and political science.
Feb-Aug 1988	Public Information Officer, City of Fresno City Clerk Department
Sep, 1981 Jan, 1988	Management Analyst II, City of Fresno Public Works Department, Water Conservation Program
Sep, 1973 Aug, 1981	Personnel Analyst/Management Analyst II/Affirmative Action Coordinator, City of Fresno Personnel Department

Military Service

February, 1966 Honorable Discharge, Specialist Fourth Class United States Army
January, 1969

Professional Organizations

Member, Measurement and Evaluation Committee, California Urban Water Conservation Council

Member, CALFED Work Plan Committee, California Urban Water Conservation Council

Reporting and Implementation Committee, California Urban Water Conservation Council

Residential Committee, California Urban Water Conservation Council

BMP Revision Committee, California Urban Water Conservation Council

Past Member, Steering Committee, California Urban Water Conservation Council

Past Chair, Water Conservation Committee, California-Nevada Section, American Water Works Association

Past member, Environmental Quality Committee, League of California Cities

Community Involvement

President, Board of Directors, Comprehensive Alcohol Program

Publications, Studies, Presentations, Video Productions

Available on request.

Costs and benefits

Salaries, fringe benefits, overhead:

Water Conservation Supervisor	$50.83	X	24 hrs.	=	$1,220
Landscape Specialists (2)	$44.40	X	136 hrs	=	$12,077

Supplies and equipment:

Water saving devices	$100.00	X	30	=	$3,000.00
Sub-meters	$1500.00	X	30	=	$45,000.00
Irrigation controllers	$120.00	X	15	=	$1,800.00

Travel:

Avg 20 miles X 30 sites X 12 months = 7200 miles @ .40 per mile $2,880.00

Contract Service:

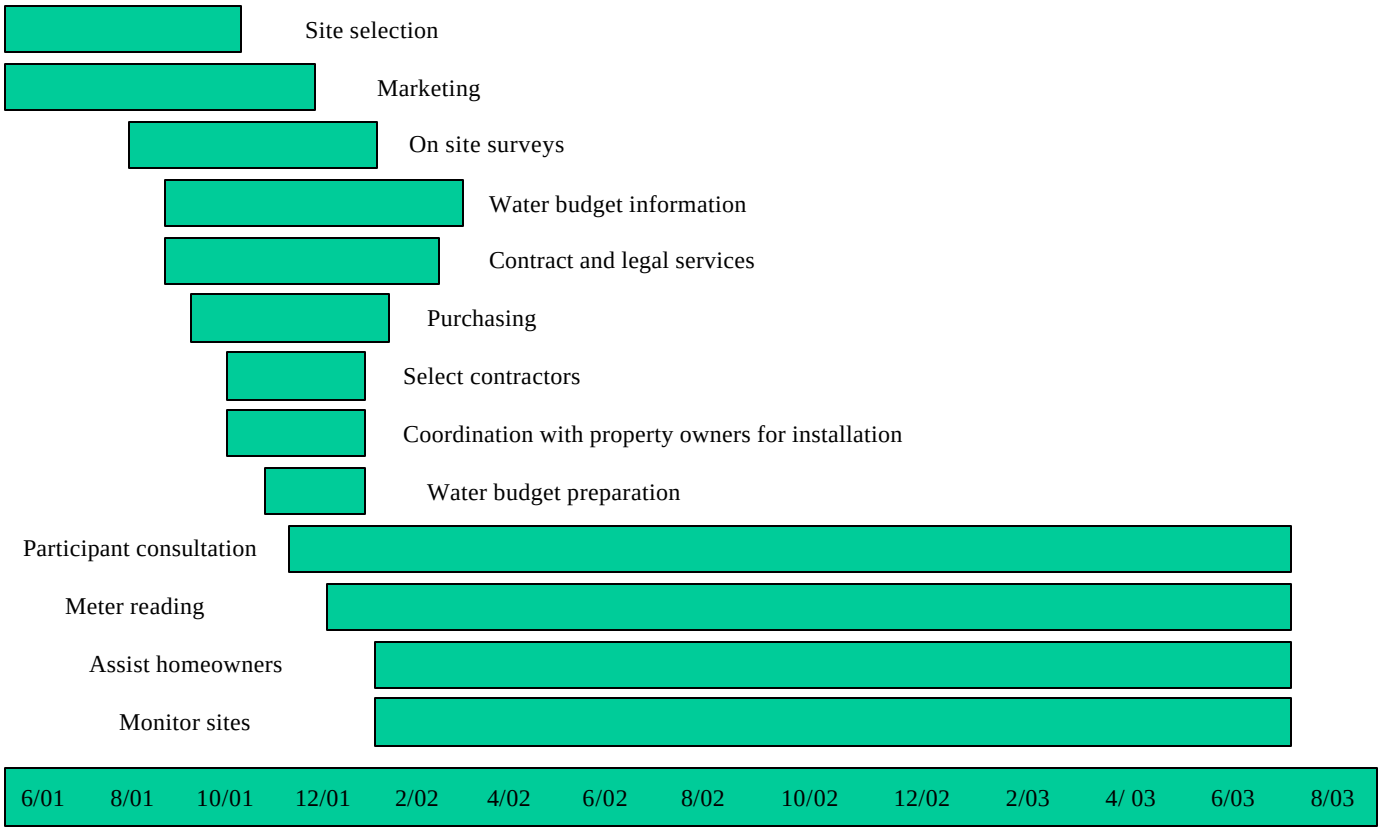
Installation of water-saving devices and controllers $5,000.00

Total estimated cost **$70,977.00**

Labor costs include site selection, coordination and procedural time, consultation with participants, water meter reading, monitoring results, and travel time.

The sub-meter readings will give the landscape water usage. This figure will be used to verify savings from the modifications to the irrigation system, and allow effective water budgeting for the landscape. Existing runoff and energy costs are estimated to be reduced by fifty percent or more. Runoff contaminants from the landscape to flood basins would be reduced, as well as groundwater overdraft.

LANDSCAPE PROJECT TIMELINE



COMMERCIAL WATER CONSERVATION PROGRAM

Scope of Work

This pilot project is designed to provide a comprehensive method to reduce water consumption and wastewater discharge in a targeted sub-population of the Commercial Industrial Institutional sector by:

- Identifying and replacing/retrofitting single pass water cooled ice makers
- Identifying and replacing/retrofitting single pass chillers coolers
- Conducting educational outreach in conservation practices

Estimated total cost of the pilot project is $90,084. $75,000 funded by the Water Use Efficiency Grant and $15,084 in kind contribution provided by the City of Fresno. The funds will be used for:

- Replacement/retrofit of single pass water cooled ice makers at approximately 6 restaurants
- Replacement/retrofit of 6 single pass chillers coolers

It is estimated that a moderately sized ice maker equipped with a single pass water cooled condenser will waste in excess of 200,000 gallons of water per year. This wasted water is not only pumped and delivered to the customer, the unpolluted water from the ice maker is then discharged to the wastewater treatment plant. An old style single pass chiller used for comfort cooling in a medium size business such as a motel or church can waste 3.75 million gallons per year. Typically, treatment plant effluent is either discharged to surface waters or held in ponds. In either case, reducing flows to a wastewater treatment plant will in turn reduce the amount of effluent that must be disposed.

Business customers who agree to replace/retrofit single pass water cooled ice makers will be eligible to receive a rebate for up to one half of the cost or $2,500 which ever is less. Business customers who replace chillers will be eligible to receive up to one half the cost or $10,000 which ever is less. In order to qualify for the ice maker program, the business customer must agree to replace/retrofit one or more of other water wasting devices identified at their facility.

Staff will**:**

- Conduct a detailed water efficiency survey for each participant
- Prepare a water consumption history for each participant
- Prepare a cost-effectiveness analysis and calculate the payback period
- Conduct detailed training in water conserving practices
- Monitor water use monthly after the retrofit, and prepare an annual report
- Estimate cost avoidance for new water supply and wastewater treatment capital costs
- Estimate the environmental benefits in reducing the amount of treated wastewater that must be held in ponding basins, thereby reducing the contribution to the mounded water table under the treatment plant
- Keep all data in an Excel spreadsheet

Qualifications of applicant

David D. Todd
1487 N. Farris Avenue
Fresno, California 93728-1521
(209) 266-9230
email davet@ci.fresno.ca.us

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Past member, Environmental Quality Committee, League of California Cities

Community Involvement

President, Board of Directors, Comprehensive Alcohol Program

Publications, Studies, Presentations, Video Productions

Available on request.

Outreach, Community Involvement, and Information Transfer

The Fresno Clovis Regional Wastewater Reclamation Facility staff will be invited to participate in compiling the list of potential participants. The City of Fresno has identified an economically disadvantaged area called the Enterprise Zone (map attached). This area will be specifically targeted to participate in this program. To extent possible, the rebates will be give to businesses within the Enterprise Zone. Results of the program will be available on the City's web page. The replacement program will promoted by the CII Water Conservation Program for Business in outreach presentations, direct mailing to business, and in utility bill inserts.

Costs and benefits

Salaries, fringe benefits, overhead:

Water Conservation Supervisor	$50.83	X	24hrs.	=	$1,220
CII Water Representative	$44.40	X	260 hrs	=	$11,544

Supplies and equipment:

Ice Machine	$2500	X	6	=	$15,000
Chillers	$10,000	X	6	=	$60,000

Travel:	1800 miles @ .40 per mile	$720
Legal (City Attorney)		$1,600
Total estimated cost		**$90,084**

Labor costs include site selection, coordination and procedural time, consultation with participants, water meter reading, monitoring results, and travel time.

Annual water savings are projected at 1.2 million gallons per year for the ice maker replacement program and 22.5 million gallons per year for the chiller replacement program. Expected life of an ice maker is 10 years for a total saving of 11.2 million gallons and the expected life of a chiller is 20 years for a total savings of. 450 million gallons. At current pumping efficiencies (817 gallons per kWh), the first year the program is fully operational, the energy savings are estimated to be 29,000 kWh per year.

COMMERCIAL PROJECT TIMELINE